In the Claims:

Please amend the claims as follows:

1. (currently amended) A system for remote programming of an industrial robot, the system comprising:

a camera for capturing an image, the camera being movably located on the robot at a local site,

a first registering unit configured to generate graphics and register the graphics generated by the first registering unit on the image from the camera, to provide a composite augmented reality image,

a remote display device located at a remote site, physically separated from the local site, for displaying a view comprising the composite augmented reality image,

a first specifying unit configured to specify a position and an orientation in the remote site by determining a position and an orientation of the remote display device in relation to a fixed remote coordinate system, wherein a position and orientation of the camera is dependent on the position and orientation specified by the first specifying unit, and wherein the first registering unit is adapted to register the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit, and wherein the display is adapted to display the generated graphics to the augmented reality image in dependence on the position and orientation specified by the first specifying unit,

a second specifying unit configured to specify a position and an orientation of the robot at the local site in relation to a local coordinate system, wherein a position and orientation of the

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robot is dependent on the position and orientation specified by the first specifying unit in the remote coordinate system,

a second registering unit configured to generate graphics and register the generated graphics on an environment at the local site or an image of the environment of the local site, in dependence on the position and the orientation specified by the second specifying unit,

a local display device configured to display the environment at the local site and the graphics generated by the second registering unit projected on the environment, and

a communication link configured to communicate information between the local site and the remote site, and to communicate to the robot positions and orientations specified by the first specifying unit ~~and the second specifying unit,~~

~~wherein the graphics generated by the first registering unit and second registering unit comprise information regarding movement of the robot.~~

2. (previously amended) The system according to claim 1, wherein said first specifying unit comprises a tracking unit adapted to determine a position and orientation of a movable device located at the remote site, the first registering unit adapted to register the generated graphics on the image in dependence of the position and orientation of the movable device, and the camera is arranged such that its position and orientation are dependent on the position and orientation of the movable device.

3. (previously amended) The system according to claim 2, wherein said movable device is the remote display device.

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4. (cancelled)

5. (previously amended) The system according to claim 1, further comprising

a graphical generator configured to generate a graphical representation, wherein the

registering unit is adapted to generate graphics based on the graphical representation.

6. (previously amended) The system according to claim 1, further comprising

operator input means located at the remote site and configured to feed data related to the

graphics to be displayed to the system, wherein the system is adapted to generate the graphics

based on said data.

7. (previously amended) The system according to claim 6, wherein said operator input

means comprises a pointing device and a tracking unit configured to determine a position of the

pointing device and wherein the system is adapted to generate a graphical representation of a

point pointed out by the pointing member based on the position of the pointing device.

8. (cancelled)

9. (previously amended) The system according to claim 1, further comprising

a second movable device located at the local site, wherein the second specifying unit

comprises a second tracking unit configured to determine the position and the orientation of the

second movable device.

10. (previously amended) The system according to claim 9, wherein said second movable device is the local display device.

11. (previously amended) The system according claim 9, further comprising

a second camera for capturing an image, the camera being arranged in a fix relation to the second movable device, wherein the second registering unit is adapted to register the generated graphics generated by the second registering unit to the image from the second camera, to provide a composite augmented reality image, and wherein the local display device is adapted to display a view comprising the composite augmented reality image.

12. (previously amended) The system according to claim 1, wherein the remote display device is adapted to display a view seen from a first visual angle that depends on the position and orientation received from the first specifying unit and wherein the local display device is adapted to display the same view as the remote display device seen from a second visual angle that depends on the position and orientation received from the second specifying unit.

13. (currently amended) The system according to claim 1, ~~further comprising means for transferring~~ wherein the communication link is configured to transfer voices between the remote and the local site ~~via the communication link.~~

14. (previously amended) The system according to claim 1, wherein the communication link comprises a network.

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15. (currently amended) A method for remote programming of an industrial robot ~~by~~ ~~remotely~~ arranged at a local site, the method comprising:

obtaining an image at the local site from a camera mounted on the robot,

generating first graphics,

generating a composite augmented reality image with a registering unit based on the image, the generated first graphics, and the specified position and orientation,

displaying ~~an~~ the augmented reality ~~view comprising graphical information overlaid an~~ ~~image captured at a~~ the ~~local site, the method comprising:~~ image at a remote site that is physically separated from the local site,

specifying a position and an orientation of the robot at the ~~at a~~ remote site ~~that is~~ ~~physically separated from the local site~~ with a tracking unit carried by or arranged on an operator at the remote site, wherein the position and orientation are in relation to a remote coordinate system,

specifying a position and an orientation at the local site in relation to a local coordinate system based on the position and orientation specified at the remote site in the remote coordinate system,

positioning and orienting the robot in the specified position and orientation such that a camera arranged on the robot assumes the specified position and orientation,

~~obtaining an image from the camera,~~

~~generating first graphics,~~

~~generating a composite augmented reality image with a registering unit based on the~~ ~~image, the generated first graphics, and the specified position and orientation,~~

~~displaying a view comprising the composite augmented reality image~~

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~~specifying a position and an orientation in the local site,~~

displaying a second view comprising an environment of the local site and the generated first graphics projected on the environment in dependence of the locally specified position and orientation, and

remotely controlling movements of the robot at the local site and remotely teaching the robot one or more waypoints at the local site to carry out a task.

16. (previously amended) The method according to claim 15, wherein specifying a position and an orientation comprises determining a position and an orientation of a movable device located at the remote site and wherein the camera is positioned and oriented according to the position and orientation of the movable device.

17. (previously amended) The method according to claim 16, wherein said movable device comprises a remote display device and wherein said view comprising the composite augmented reality image is displayed on the remote display device.

18. (currently amended) The method according to claim 15, wherein the camera is mounted on the robot, the method further comprising

controlling movements of the robot according to the position and orientation of ~~the~~ a movable device.

19. (previously amended) The method according to claim 15, further comprising

obtaining data related to the generated first graphics to be displayed, and

generating the first graphics based on said data.

20. (previously amended) The method according to claim 15, further comprising

receiving information about the position of a pointing device and generating first graphics

representing a point pointed out by the pointing member, based on the position of the pointing

device.

21. (cancelled)

22. (previously amended) The method according to claim 15, wherein specifying a

position and an orientation in the local site comprises determining a position and an orientation

of a second movable device located at the local site.

23. (previously amended) The method according to claim 22, wherein the second

movable device comprises a local display device and wherein said second view, comprising the

environment of the local site and the graphics, is displayed on the local display device.

24. (currently amended) The method according to claim 22, 23, further comprising

capturing an image from a second camera being arranged in a fixed relation to the second

movable device,

registering the generated graphics on the image from the second camera, to provide a

composite augmented reality image, and·

displaying a view comprising the composite augmented reality image on the local display

device.

25. (previously amended) The method according to claim 15, further comprising

generating second graphics and

displaying the second view comprising the environment of the local site and the second

graphics projected on the environment in dependence of the specified position and orientation.

26. (previously amended) The method according to claim 25, further comprising

generating a local graphical representation,

generating a remote graphical representation,

transferring the local and remote graphical representations between the local and the

remote site,

generating the remote first graphics based on the local and the remote graphical

representation, and

generating the second graphics based on the local and the remote graphical

representation.

27. (previously amended) The method according to claim 15, wherein the view

displayed at the remote site comprises the environment of the local site and the overlaid graphics

seen from an visual angle that depends on the position and orientation specified in the remote site

and the view displayed in the local site comprises the environment of the local site and the

overlaid graphics seen from an visual angle that depends on the position and orientation specified

in the local site.

28. (currently amended) A computer program product, comprising:

a computer readable medium; and

computer program instructions recorded on the computer readable medium and executable by a processor for performing a method for remote programming of an industrial robot by remotely displaying an augmented reality view comprising graphical information overlaid an image captured at a local site, the method comprising

obtaining an image at the local site from a camera mounted on the robot,

generating first graphics,

generating a composite augmented reality image with a registering unit based on the image, the generated first graphics, and the specified position and orientation,

displaying ~~an~~ the augmented reality ~~view comprising graphical information overlaid an image captured at a the local site, the method comprising:~~ image at a remote site that is physically separated from the local site,

specifying a position and an orientation of the robot at the ~~at a~~ remote site ~~that is physically separated from the local site~~ with a tracking unit carried by or arranged on an operator at the remote site, wherein the position and orientation are in relation to a remote coordinate system,

specifying a position and an orientation at the local site in relation to a local coordinate system based on the position and orientation specified at the remote site in the remote coordinate system,

positioning and orienting the robot in the specified position and orientation such that a camera arranged on the robot assumes the specified position and orientation,

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obtaining-an-image-from-the-camera,

generating-first-graphics,

generating-a-composite-augmented-reality-image-with-a-registering-unit-based-on-the image,-the-generated-first-graphics,-and-the-specified-position-and-orientation,

displaying-a-view-comprising-the-composite-augmented-reality-image

specifying-a-position-and-an-orientation-in-the-local-site,

displaying a second view comprising an environment of the local site and the generated first graphics projected on the environment in dependence of the locally specified position and orientation, and

remotely controlling movements of the robot at the local site and remotely teaching the robot one or more waypoints at the local site to carry out a task.

29. (cancelled)

30. (currently amended) The Use-of-a system according to claim 1, wherein the system is configured for remote programming of an industrial robot by controlling movements of the robot at the local site and teaching the robot one or more waypoints to carry out a task.

31. (previously amended) The system according to claim 11, further comprising a handheld display device comprising the display member and the camera.

32. (previously amended) The system according to claim 31, wherein the handheld display device is arranged so that the user seems to look directly through the display.

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33. (currently amended) The ~~Use of the~~ system according to claim 1, wherein the robot comprises elements for a paint application.